

# **AIR FORCE QUALIFICATION TRAINING PACKAGE (AFQTP)**



for  
ENVIRONMENTAL  
(3E4X3)

## **MODULE 14**

### **OPERATION AND MAINTENANCE OF PEST MANAGEMENT**

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Career Field Education and Training Plan (CFETP) references from 1 Apr 97 version.

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(Colonel Lance C. Brendel)

Notice. This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

**AIR FORCE QUALIFICATION TRAINING PACKAGES**  
**for**  
**ENVIRONMENTAL**  
**(3E4X3)**

**INTRODUCTION**

*Before starting this AFQTP*, refer to and read the “Trainee/Trainer Guide” located on the AFCESA Web site <http://www.afcesa.af.mil/>

*AFQTPs are mandatory and must be completed* to fulfill task knowledge requirements on core and diamond tasks for upgrade training. *It is important for the trainer and trainee to understand* that an AFQTP does not replace hands-on training, nor will completion of an AFQTP meet the requirement for core task certification. AFQTPs will be used in conjunction with applicable technical references and hands-on training.

*AFQTPs and Certification and Testing (CerTest) must be used as minimum upgrade requirements for Diamond tasks.*

**MANDATORY minimum upgrade requirements:**

***Core task:***

AFQTP completion  
Hands-on certification

***Diamond task:***

AFQTP completion  
CerTest completion (80% minimum to pass)

***Note:*** *Trainees will receive hands-on certification training for Diamond Tasks when equipment becomes available either at home station or at a TDY location.*

***Put this package to use.*** Subject matter experts under the direction and guidance of HQ AFCESA/CEOT revised this AFQTP. If you have any recommendations for improving this document, please contact the Career Field Manager at the address below.

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## OPERATE MANUAL PEST MANAGEMENT EQUIPMENT

**MODULE 14**

**AFQTP UNIT 2**

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**DUSTERS (14.2.4.1.)**

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**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

## DUSTERS

### *Task Training Guide*

<b>STS Reference Number/Title:</b>	14.2.4.1., Dusters
<b>Training References:</b>	<ul style="list-style-type: none"><li>• Manufacturers Manual</li><li>• AFPMB TIM 24</li></ul>
<b>Prerequisites:</b>	<ul style="list-style-type: none"><li>• Possess as a minimum a, 3E4X3 AFSC</li></ul>
<b>Equipment/Tools Required:</b>	<ul style="list-style-type: none"><li>• Personal safety equipment</li><li>• Dusters and Granular Spreaders</li></ul>
<b>Learning Objective:</b>	<ul style="list-style-type: none"><li>• Trainee should learn to safely operate manual dusters and granular spreaders.</li></ul>
<b>Samples of Behavior:</b>	<ul style="list-style-type: none"><li>• Trainee should be able to operate manual dusters and granular spreaders while performing pest control operations.</li></ul>
<b>Notes:</b>	
<ul style="list-style-type: none"><li>• To successfully complete this element follow the steps outlined in this section.</li><li>• The trainer will supply trainee with appropriate on-the-job-training to successfully perform tasks.</li></ul>	

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## DUSTERS

**Background:** Pest control equipment is the backbone of the pest control operation. Without equipment the pest controller would not be able to perform many control operations. For these reasons it is important to be skillful in operating pest management equipment. In this section manual dusters and granular spreaders will be the pieces of equipment highlighted. This equipment is very portable which gives the environmental specialist access to areas that cannot be reached with large equipment. There are a variety of manual dusters used to disperse dusts such as: bulb dusters, bellows dusters, and plunger dusters. There are two manual spreaders to disperse granules: the push-type spreader and the hand crank spreader. The specific piece of equipment used will depend on the pesticide chosen, the size of application, and the area being treated.

The following chart depicts the differences in the dusters, their usage's, and maintenance requirements.

**Table 1, Duster Type, Size, Usage and Maintenance**

<b>Type</b>	<b>Size and Type</b>	<b>Usage</b>	<b>Maintenance</b>
1. Bulb Duster (Figure 1)	4 to 8 oz capacity rubber bulb or container with a metal screw cap containing a dust nozzle.	Used for careful dusts placements in crack and crevice operations, such as cockroach control, and in electrical boxes where liquid cannot be used. Gentle hand pressure dispenses the dust.	Check duster periodically for holes or rips. Replace as needed.
2. Bellows Duster (Figure 2)	4 to 8 oz capacity rubber container with metal at top and bottom and a metal spring inside. Dust nozzle is at bottom of container. Fill cap is in the top of container.	Used for small to medium size applications such as dispensing tracking powder for mice and rats. Can also be used for precision crack and crevice treatments when duster is turned upside down.	Check for rips and tears in rubber periodically. Replace as needed.

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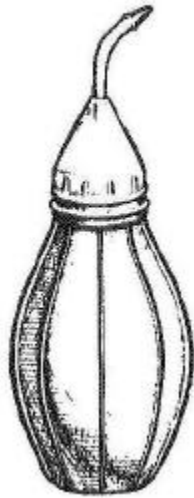
The following chart depicts the differences in the granular spreaders, their usage's, and maintenance requirements.

**Read the label and wear all applicable PPE while filling and applying these pesticides**

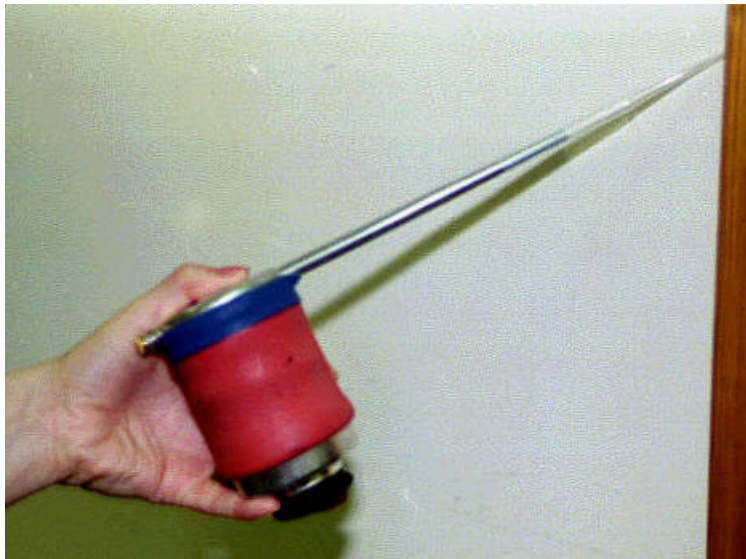
**Table 2, Granular Spreaders, Size, Usage, and Maintenance**

<b>Type</b>	<b>Size and Appearance</b>	<b>Usage</b>	<b>Maintenance</b>
1. Push-type spreader (Figure 3)	This spreader is on wheels and as it is pushed over the area drops the granules evenly. The desired rate can be adjusted up to 50 pounds per hour.	Used for doing lawns or other small to medium ground areas.	Clean after each use. Oil spreader parts after cleaning.
2. Hand crank spreader (Figure 4)	This spreader is usually round, manually carried by a strap that goes over the neck, and hand cranked to sling the granules out over the area. This spreader has a flow rate of 200 pounds per hour.	This spreader is used in a variety of different situations to apply insecticides and herbicides including mosquito larviciding in large bodies of water, herbiciding in lawns, and other small outdoor areas where the push-type or larger spreaders cannot be used.	Clean after each use. Replace parts as needed.

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**Figure 1, Bulb Duster**



**Figure 2, Billows Duster**

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**Figure 3, Push Type Spreader**



**Figure 4, Hand Crank Spreader**

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*To perform the task, follow these steps:*

The succeeding steps outline the procedures for operating the manual dusters and spreaders.

**Step 1: The first step in selecting equipment is to identify the pest to be controlled.**

**Step 2: Next, select the pesticide that best suits the situation.**

**Step 3: Then select the equipment to apply that pesticide.**

**Step 4: Fill the equipment with pesticide.**

**Step 5: Begin the pesticide treatment technique.**

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### Review Questions for Dusters

Question	Answer
1. Which of the dusters listed below is <b>not</b> a manual operated duster?	<ul style="list-style-type: none"> <li>a. The bellows duster</li> <li>b. The ULV duster</li> <li>c. The bulb duster</li> <li>d. The plunger duster</li> </ul>
2. The bulb duster has a spring inside to help hold its shape.	<ul style="list-style-type: none"> <li>a. True</li> <li>b. False</li> </ul>
3. This duster is used for small to medium jobs such as tracking powder.	<ul style="list-style-type: none"> <li>a. The bulb duster</li> <li>b. The plunger duster</li> <li>c. The bellows duster</li> <li>d. All the above</li> </ul>
4. This duster has a 16 oz capacity and can be used for bee jobs.	<ul style="list-style-type: none"> <li>a. The bulb duster</li> <li>b. The plunger duster</li> <li>c. The bellows duster</li> <li>d. None of the above</li> </ul>
5. What is the first step in operating a spreader?	<ul style="list-style-type: none"> <li>a. Fill the duster</li> <li>b. Identify the pest</li> <li>c. Select the equipment</li> <li>d. Begin the spray operation</li> </ul>
6. No PPE is needed when filling the duster or spreader.	<ul style="list-style-type: none"> <li>a. True</li> <li>b. False</li> </ul>
7. This manual operated piece of equipment is used in small outdoor areas and has a 200 pound per hour rate of flow.	<ul style="list-style-type: none"> <li>a. The bulb duster</li> <li>b. The plunger duster</li> <li>c. The hand cranked spreader</li> <li>d. The push-type spreader</li> </ul>

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**DUSTERS**

Performance Checklist		
Step	Yes	No
1. Did the trainee identify pest to be treated?		
2. Did the trainee select the correct pesticide?		
3. Did the trainee select the correct equipment to disperse the pesticide?		
4. Did the trainee fill the duster or spreader with correct PPE?		
5. Did the trainee successfully operate the duster or spreader?		

**FEEDBACK:** Trainer should provide both positive and/or negative feedback to the trainee immediately after the task is performed. This will ensure the issue is still fresh in the mind of both the trainee and trainer.

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## OPERATE MANUAL PEST MANAGEMENT EQUIPMENT

MODULE 14

AFQTP UNIT 2

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SPRAYERS (14.2.4.2.)

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## SPRAYERS

### *Task Training Guide*

<b>STS Reference Number/Title:</b>	14.2.4.2., Sprayers
<b>Training References:</b>	<ul style="list-style-type: none"><li>• Manufacturers Manual</li><li>• AFPMB TIM 24</li></ul>
<b>Prerequisites:</b>	<ul style="list-style-type: none"><li>• Possess as a minimum a, 3E4X3 AFSC</li></ul>
<b>Equipment/Tools Required:</b>	<ul style="list-style-type: none"><li>• Manual sprayers</li><li>• Personal safety equipment</li></ul>
<b>Learning Objective:</b>	<ul style="list-style-type: none"><li>• Trainee should learn to safely operate manual pesticide spray equipment.</li></ul>
<b>Samples of Behavior:</b>	<ul style="list-style-type: none"><li>• Trainee should be able to select the appropriate spray equipment and operate that equipment on the job.</li></ul>
<b>Notes:</b>	
<ul style="list-style-type: none"><li>• To successfully complete this element follow the steps outlined in this section.</li><li>• The trainer will supply trainee with appropriate on-the-job-training to successfully perform task.</li></ul>	

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## SPRAYERS

**Background:** Pest control equipment is the backbone of the pest control operation. Without equipment the pest controller would not be able to perform many control operations. For these reasons it is important to be skillful in operating and maintaining pest management equipment. In this section manual sprayers will be the equipment highlighted. This equipment is very portable which gives the environmental specialist access to areas that cannot be reached with large equipment. There are a variety of manual sprayers used to disperse liquids such as: compressed-air sprayers, pressurized cylinder sprayer, and the hand-carried electric sprayer. The specific sprayer used will depend on the size of application and the area being treated.

The following chart depicts the differences in the sprayers, their usage's, and maintenance requirements.

**Table 1, Sprayers Usage and Maintenance**

<b>Type</b>	<b>Size and Appearance</b>	<b>Usage</b>	<b>Maintenance</b>
1. Compressed-air sprayer (Figure 1)	This sprayer ranges from 1 to 3 gallons in capacity; stainless steel or plastic tank, brass wand and nozzle, and rubber hose connecting the two.	These sprayers are the heart of the pest control operation and are used in many different functions from cockroach control to herbiciding.	Rinse out sprayer after each use. Clean tank, wand, and nozzles at least once a week. Replace parts as needed.
2. Pressurized cylinder sprayer (Actisol Unit) (Figure 2)	Stainless steel 15 pound capacity tank. Brass wand, rubber hose, and special nozzle to dispense a micronized mixture.	This sprayer uses compressed air to inject chemical deep into wall voids and cracks and crevices to control cockroaches and other pests.	Rinse and clean after each use. Check hose for cracks and rips. Replace parts as needed.
3. Hand-held electric sprayer (Figure 3)	Plastic lightweight electric sprayer with one quart capacity bottle attachment.	ULV sprayer used for indoor fogging operations to control: cockroaches, fleas, flies, and other household pest. It can also be used to control mosquitoes in outdoor settings.	Clean after each use. Check electrical cord for cracks and tears. Replace as needed.

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**Figure 1, Compressed Air Sprayers**



**Figure 2, Pressurized Cylinder Sprayer (Actisol Unit)**

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**Figure 3, Hand Held Electric Sprayer**

*To perform the task, follow these steps:*

The succeeding steps outline the procedures for selecting and operating the manual dusters.

**Step 1: The first step in selecting equipment is to identify the pest to be controlled.**

**Step 2: Next, select the pesticide that best suits the situation.**

**Step 3: Then select the equipment that will effectively apply that pesticide.**

**Step 4: Fill the equipment with pesticide.**

**Step 5: Begin the pesticide treatment technique.**

**HINT:**

Read the label and wear all applicable PPE while filling and applying liquid pesticides.

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**Review Questions  
for  
Sprayers**

Question	Answer
1. Which of the following is <b>not</b> a manual liquid sprayer?	a. Compressed-air sprayer b. Hydraulic Sprayer c. Pressurized cylinder sprayer d. Hand-held electric sprayer
2. The compressed-air sprayer is the heart of pest control operation.	a. True b. False
3. What is the tank capacity of the pressurized cylinder sprayer?	a. 1 to 3 gallons b. 15 pounds c. 1 quart d. None of the above
4. What is the hand-held electric sprayer used for?	a. Everything from cockroaches to herbiciding b. Crack and Crevice applications c. ULV Fogging operations d. All of the above
5. What is the third step in the procedures for selecting manual sprayers?	a. Select the pesticide b. Fill the equipment c. Select the equipment d. Identify the pest
6. No PPE is needed while filling and operating manual spray equipment.	a. True b. False

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**SPRAYERS**

Performance Checklist		
Step	Yes	No
1. Did the trainee identify the pest to be controlled?		
2. Did the trainee select the proper pesticide?		
3. Did the trainee match the equipment with the pesticide selected?		
4. Did the trainee wear proper PPE while filling equipment?		
5. Was trainee proficient while operating equipment?		

**FEEDBACK:** Trainer should provide both positive and/or negative feedback to the trainee immediately after the task is performed. This will ensure the issue is still fresh in the mind of both the trainee and trainer.

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## OPERATE MANUAL PEST MANAGEMENT EQUIPMENT

MODULE 14

AFQTP UNIT 2

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### GRANULE SPREADERS (14.2.4.3.)

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## GRANULE SPREADERS

### *Task Training Guide*

<b>STS Reference Number/Title:</b>	14.2.4.3., Granules Spreaders
<b>Training References:</b>	<ul style="list-style-type: none"><li>• Manufacturers Manual</li><li>• AFPMB TIM 24</li></ul>
<b>Prerequisites:</b>	<ul style="list-style-type: none"><li>• Possess as a minimum a, 3E4X3 AFSC</li></ul>
<b>Equipment/Tools Required:</b>	<ul style="list-style-type: none"><li>• Personal safety equipment</li><li>• Granular Spreaders</li></ul>
<b>Learning Objective:</b>	<ul style="list-style-type: none"><li>• Trainee should learn to safely operate granular spreaders.</li></ul>
<b>Samples of Behavior:</b>	<ul style="list-style-type: none"><li>• Trainee should be able to operate granular spreaders while performing pest control operations.</li></ul>
<b>Notes:</b>	
<ul style="list-style-type: none"><li>• To successfully complete this element follow the steps outlined in this section.</li><li>• The trainer will supply trainee with appropriate on-the-job-training to successfully perform tasks.</li></ul>	

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## GRANULE SPREADERS

**Background:** Pest control equipment is the backbone of the pest control operation. Without equipment the pest controller would not be able to perform many control operations. For these reasons it is important to be skillful in operating pest management equipment. In this section manual dusters and granular spreaders will be the pieces of equipment highlighted. This equipment is very portable which gives the environmental specialist access to areas that cannot be reached with large equipment. There are a variety of manual spreaders to disperse granules: the push-type spreader and the hand crank spreader. The specific piece of equipment used will depend on the pesticide chosen, the size of application, and the area being treated.

The following chart depicts the differences in the dusters, their usage's, and maintenance requirements.

**Table 1, Granular Spreaders**

Type	Size and Appearance	Usage	Maintenance
1. Push-type spreader (Figure 1)	This spreader is on wheels and as it is pushed over the area drops the granules evenly. The desired rate can be adjusted up to 50 pounds per hour.	Used for doing lawns or other small to medium ground areas.	Clean after each use. Oil spreader parts after cleaning.
2. Hand crank spreader (Figure 2)	This spreader is usually round, manually carried by a strap that goes over the neck, and hand cranked to sling the granules out over the area. This spreader has a flow rate of 200 pounds per hour.	This spreader is used in a variety of different situations to apply insecticides and herbicides including mosquito larviciding in large bodies of water, herbiciding in lawns, and other small outdoor areas where the push-type or larger spreaders cannot be used.	Clean after each use. Replace parts as needed.

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**Figure 1, Hand Crank Spreader**



**Figure 2, Push Type Spreader**

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*To perform the task, follow these steps:*

The succeeding steps outline the procedures for operating the manual dusters and spreaders.

**Step 1: The first step in selecting equipment is to identify the pest to be controlled.**

**Step 2: Next, select the pesticide that best suits the situation.**

**Step 3: Then select the equipment to apply that pesticide.**

**Step 4: Fill the equipment with pesticide.**

**Step 5: Begin the pesticide treatment technique.**

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**Review Questions  
for  
Granule Spreaders**

<b>Question</b>	<b>Answer</b>
1. What is the first step in operating a spreader?	a. Fill the duster b. Identify the pest c. Select the equipment d. Begin the spray operation
2. No PPE is needed when filling the duster or spreader.	a. True b. False
3. This manual operated piece of equipment is used in small outdoor areas and has a 200 pound per hour rate of flow.	a. The bulb duster b. The plunger duster c. The hand cranked spreader d. The push-type spreader

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**GRANULE SPREADERS**

<b>Performance Checklist</b>		
<b>Step</b>	<b>Yes</b>	<b>No</b>
1. Did the trainee identify pest to be treated?		
2. Did the trainee select the correct pesticide?		
3. Did the trainee select the correct equipment to disperse the pesticide?		
4. Did the trainee fill the spreader with correct PPE?		
5. Did the trainee successfully operate the duster or spreader?		

**FEEDBACK:** Trainer should provide both positive and/or negative feedback to the trainee immediately after the task is performed. This will ensure the issue is still fresh in the mind of both the trainee and trainer.

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## OPERATE MANUAL PEST MANAGEMENT EQUIPMENT

**MODULE 14**

**AFQTP UNIT 2**

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### TRAPPING DEVICES (14.2.4.4.)

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## TRAPPING DEVICES

### *Task Training Guide*

<b>STS Reference Number/Title:</b>	14.2.4.4., Trapping devices
<b>Training References:</b>	<ul style="list-style-type: none"><li>• AFPMB TIM 24</li><li>• Manufacturers Manual</li></ul>
<b>Prerequisites:</b>	<ul style="list-style-type: none"><li>• Possess as a minimum a, 3E4X3 AFSC</li></ul>
<b>Equipment/Tools Required:</b>	<ul style="list-style-type: none"><li>• Traps</li><li>• Personal Safety Equipment</li></ul>
<b>Learning Objective:</b>	<ul style="list-style-type: none"><li>• Trainee should learn to safely operate pest trapping devices.</li></ul>
<b>Samples of Behavior:</b>	<ul style="list-style-type: none"><li>• Trainee should be able to select the appropriate trapping device for a particular pest and operate it on the job.</li></ul>
<b>Notes:</b>	
<ul style="list-style-type: none"><li>• To successfully complete this element follow the steps outlined in this section.</li><li>• The trainer will supply trainee with appropriate on-the-job-training to successfully perform task.</li></ul>	

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## TRAPPING DEVICES

**Background:** Pest control equipment is the backbone of the pest control operation. Without equipment the pest controller would not be able to perform many control operations. For these reasons it is important to be skillful in operating and maintaining pest management equipment. In this section trapping devices will be the equipment highlighted. There are a variety of trapping devices used to control a variety of pests. The specific trapping device used will depend on the pest, and the area being treated.

The following chart depicts the differences in the trapping devices, their usage's, and maintenance requirements.

**Table 1, Trapping Device Usage and Maintenance**

Type	Size and Appearance	Usage	Maintenance
1. Mouse Trap (wood) (Figure 1)	This trap is 2 in. x 4 in. long. It has a wood base with a metal spring and trigger and is deadly to mice.	Used in mouse control procedures.	Very little maintenance needed. Clean trigger periodically. Very inexpensive, replace when inoperative.
2. Mouse Trap Live (Tin Cat) (Figure 2)	This trap is made of metal and usually has a clear plastic cover in the top used for observation.	This trap is used to catch live mice.	Very little maintenance is required on this trap. Clean after use.
3. Rat Trap (wood)	This trap is 4 in. x 8 in. and looks like a larger version of the mouse trap. It has a wood base and metal spring and trigger.	Used in rat control procedures. Although, rat traps are not always as effective as mouse traps.	Very little maintenance. Clean trigger periodically. Inexpensive, replace as needed.

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**Table 1, Trapping Device Usage and Maintenance**

<b>Type</b>	<b>Size and Appearance</b>	<b>Usage</b>	<b>Maintenance</b>
4. Glueboards (Figure 3)	Glueboards come in many different sizes depending on what pest is targeted. They have a cardboard or plastic base with glue on top. The rat glueboards consist of a plastic tray filled with glue, as rats are harder to contain.	Glueboards have many different uses and are among the leading tools for IPM. They can be used as traps for mice and rats as well as survey tools for almost any insect.	There is no maintenance to glueboards. Once they are used just simply throw them away.
5. Live Traps (Cage) (Figure 4)	These traps are made of metal wire with a trigger and a door. Once the animal walks into the trap door falls to trap it inside. There are three sizes of live traps small, medium, and large.	These traps are used to, as the name suggests, capture the animal live. There are usually used to capture live animal and relocate them to other areas.	Maintenance includes oiling the trigger mechanisms periodically and cleaning the traps after use.
6. Pigeon traps (Figure 5)	These traps look like regular live traps except for the doors. The door on each end is made of dangling metal that look like fingers. The doors only open one-way with no means of escape.	Used to trap pigeons live.	Very little maintenance required for these traps. Clean after use.

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**Table 1, Trapping Device Usage and Maintenance**

<b>Type</b>	<b>Size and Appearance</b>	<b>Usage</b>	<b>Maintenance</b>
7. Fly Traps (sticky)	Paper trap with glue that is hung in an area where flies are prevalent.	Used to attract and trap flies.	No maintenance required. When trap fills up throw it away.
8. UV Light Trap (Figure 6)	An electronic trap usually with two Ultra-Violet light bulbs. The unit also has a glueboard positioned in the bottom of it.	This trap is a highly effective fly control mechanism indoors. The UV light bulbs attract the flies to them and once the flies are in the trap are caught on the glueboards at the bottom.	Replace bulbs when burnt out. Replace glueboards when full. Check electrical cord for rips and tears.
9. Light Traps (New Jersey or Sams)	A trap with a light, a fan, a photo-cell and a mesh capture bag. Usually there is a rain cover over the entire trap. The trap is powered by a six volt re-chargeable battery.	This trap is used to trap and survey certain night flying insects such as mosquitoes. Surveys identify amounts of mosquitoes and types of species found in the area. The insects are attracted to the light. The fan below the light pulls them into the mesh catch bag and retains them.	Check and replace batteries as needed. Check and replace cord as needed. Check and replace mesh bag as needed. Replace light bulb as needed. Check and replace photo-cell as needed.

**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

**Table 1, Trapping Device Usage and Maintenance**

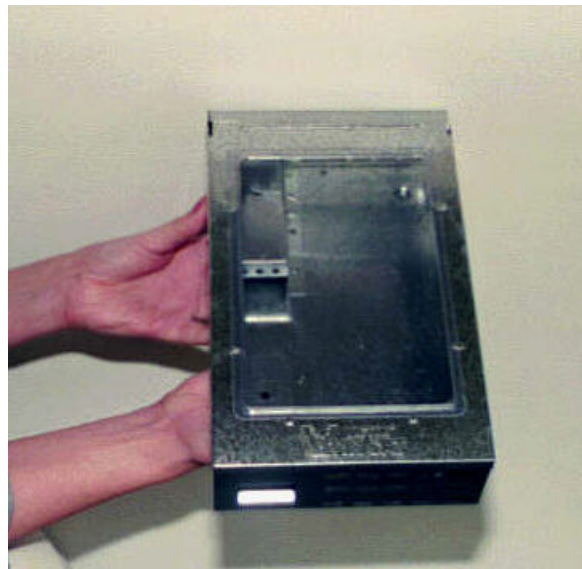
Type	Size and Appearance	Usage	Maintenance
10. Harpoon Trap (Figure 7)	This is a relatively large trap made of metal with two large spikes, a number of smaller spikes a spring and a trigger.	This trap is used exclusively for moles. The trap is placed in the ground over a mole run with the two large spikes on either side of the run. The trigger is placed snugly over the run and when the mole comes through the trap springs propelling the smaller spikes into the ground.	Clean and oil after each use.

**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.



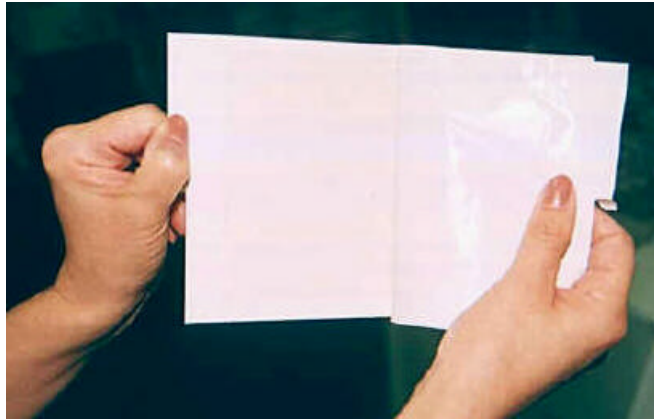


**Figure 1, Wooden Mouse Trap**



**Figure 2, Mouse Trap (Tin Cat)**

**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

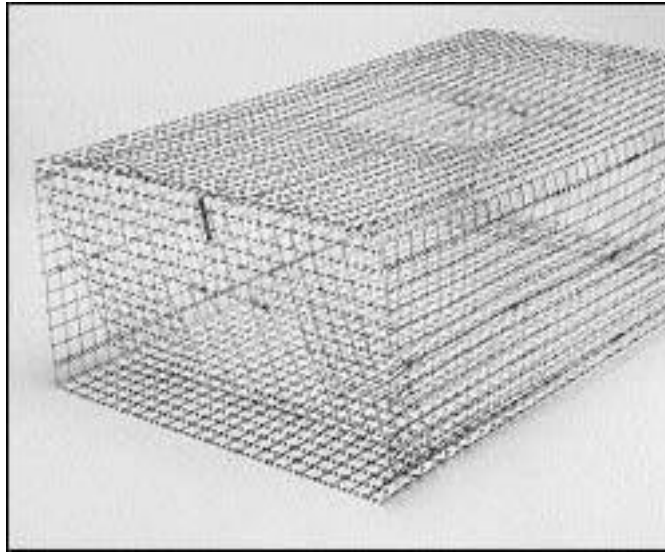


**Figure 3, Glueboards**

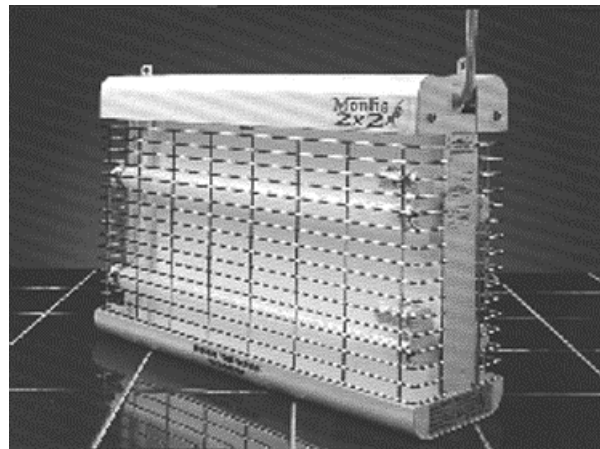


**Figure 4, Live Trap (Cage)**

**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

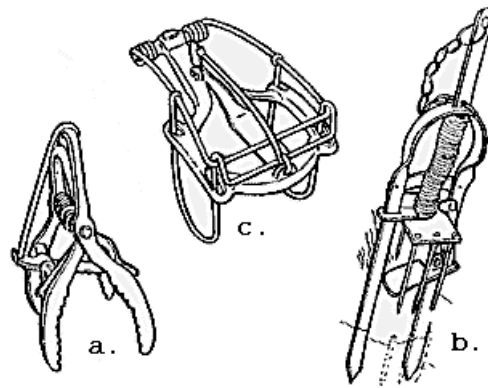


**Figure 5, Pigeon Trap**



**Figure 6, UV Light Trap**

**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.



**Figure 7, Harpoon Trap**

*To perform the task, follow these steps:*

The following steps outline the procedures for selecting the correct trapping device to use to control or survey for a particular pest.

**Step 1: The first step in selecting trapping devices is to identify the pest to be controlled.**

**Step 2: Next, select the trap that best suits the situation and will best perform the job.**

**HINT:**

It is important to decide if this trap is going to be used for control purposes or survey purposes. This could drastically effect your decision on which trap to use. Also decide if these traps are going to be used in conjunction with other control measures, this could also effect your decision.

**Step 3: Check the traps daily and service by emptying or replacing as needed.**

**Step 4: Record your progress**

**Step 5: Once job is complete collect traps and maintain them for the next job.**

**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

### Review Questions for Trapping Devices

Question	Answer
1. Which trap is 2 in. x 4 in. and has a wooden base?	a. Rat trap b. Harpoon trap c. Fly trap d. Mouse trap
2. The tin cat has a clear plastic cover in the top for observation.	a. True b. False
3. Which of the following is not a use for glueboards?	a. Trapping rats b. Trapping mice c. Trapping moles d. Survey tool
4. Which trap has two doors made of dangling metal that look like fingers?	a. Fly traps b. Pigeon traps c. Harpoon traps d. Glue board
5. Which trap consists of a photo-cell, light bulb and fan?	a. UV Light trap b. Light trap (Sam's) c. Pheromone trap d. Fly Trap
6. Which trap is used exclusively for moles?	a. Harpoon trap b. Live trap c. Pheromone trap d. Glue board
7. Once the traps are set there is no need to check them.	a. True b. False

**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

### TRAPPING DEVICES

Performance Checklist		
Step	Yes	No
1. Did the trainee identify the pest?		
2. Did the trainee select suitable trapping device?		
3. Where the traps checked daily and serviced?		
4. Where records kept of the progress?		
5. Once the job was finished where the traps collected and maintained?		

**FEEDBACK:** Trainer should provide both positive and/or negative feedback to the trainee immediately after the task is performed. This will ensure the issue is still fresh in the mind of both the trainee and trainer.

**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.



## OPERATE POWERED PEST MANAGEMENT EQUIPMENT

**MODULE 14**

**AFQTP UNIT 3**

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**DUSTERS (14.3.4.1.)**

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**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

## DUSTERS

### *Task Training Guide*

<b>STS Reference Number/Title:</b>	14.3.4.1., Dusters
<b>Training References:</b>	<ul style="list-style-type: none"><li>• AFPMB TIM 24</li><li>• Manufactures Manuals</li></ul>
<b>Prerequisites:</b>	<ul style="list-style-type: none"><li>• Possess as a minimum a, 3E4X3 AFSC</li></ul>
<b>Equipment/Tools Required:</b>	<ul style="list-style-type: none"><li>• Backpack dust-mist blower</li><li>• Electric power duster</li></ul>
<b>Learning Objective:</b>	<ul style="list-style-type: none"><li>• The trainee should learn to operate the equipment.</li></ul>
<b>Samples of Behavior:</b>	<ul style="list-style-type: none"><li>• Trainee should operate the equipment.</li></ul>
<b>Notes:</b>	
<ul style="list-style-type: none"><li>• The trainee must demonstrate his/her ability to operate equipment to complete this lesson -- no exceptions.</li></ul>	

**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.



## DUSTERS

**Background:** One of the most important concerns in any pest management program is to properly select, use and care for pesticide dispersal equipment. There is a variety of pesticide formulations to choose from, there is also the need to select the equipment best designed to effectively apply those products.

The two main power operated dusters are the backpack mist-dust blower and the electric dust blower.

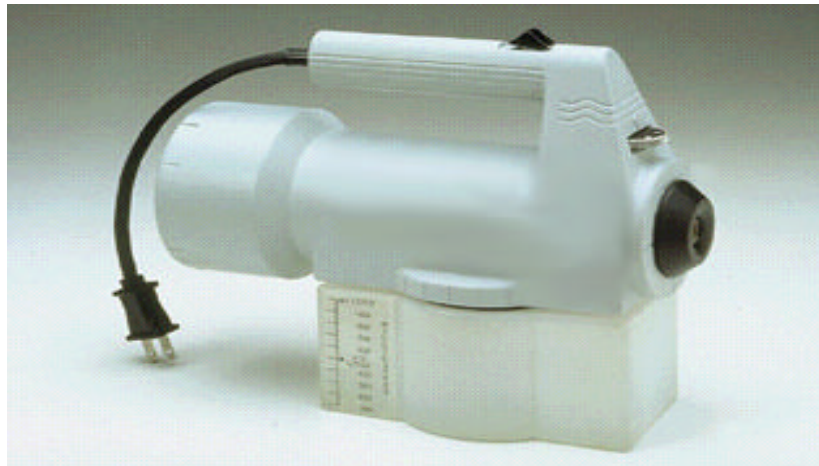
**Table 1, Duster Type, Size, Appearance, Usage and Maintenance**

<b>Type</b>	<b>Size and Appearance</b>	<b>Usage</b>	<b>Maintenance</b>
1. Backpack mist-dust blower. (Figure 1)	5.3 gallons capacity for liquid pesticides.  15 pound capacity for dry pesticides.	Small outdoor areas  Areas unreachable with large mist-dust blowers.	Remove holding tank and clean inside and outside with water. Check tank cap for damage. Remove and clean volume control valve. Clean shoulder pads after each use. Check oil and fuel before each use.
2. Electric dust blower. (Figure 2)	Light weight 1.5 gallon plastic tank 110 ac or 220 ac power 18" charger extension	Dust operations to treat voids, attics crawl spaces under structures and other large areas.	Check electrical cord for defects. Check plastic tank for any cracks or defects. Check charge extension for defects.

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**Figure 1, Backpack Mist Blower**



**Figure 2, Electric Dust Blower**

**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

*To perform the task, follow these steps:*

The step-by-step procedures for operating the powered duster are listed below.

**Step 1: Determine the pest to be eradicated.**

**Step 2: Select the proper pesticide to be applied.**

**Step 3: Select either the backpack or the electric duster model. This will depend on the area to be treated.**

**Step 4: Fill the pesticide dispersal equipment with dust.**

**HINT:**

Your proper PPE must be worn during this operation.

**Step 5: Start your pesticide treatment.**

**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

**Review Questions  
for  
Dusters**

<b>Question</b>	<b>Answer</b>
1. Which of the following is an important concern for pesticide dispersal equipment?	a. Selection b. Use c. Care d. All of the above
2. What is the maximum amount dry pesticide can the backpack mist-dust blower carry?	a. 5.3 pounds b. 10 pounds c. 15 pounds d. 20 pounds
3. Electric dust blower is used to dust or treat voids, attics and crawl spaces.	a. True b. False
4. What is the maximum amount of pesticide can the electric dust blower can carry?	a. 1.5 gallons b. 5.3 gallons c. 10 gallons d. 12.5 gallons

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## DUSTERS

Performance Checklist		
Step	Yes	No
1. Did the trainee survey area and identify pest?		
2. Did the trainee select proper pesticide for pest problem?		
3. Did the trainee select the correct equipment?		
4. Did the trainee don proper PPE to mix pesticide?		
5. Did the trainee don proper PPE before application began?		

**FEEDBACK:** Trainer should provide both positive and/or negative feedback to the trainee immediately after the task is performed. This will ensure the issue is still fresh in the mind of both the trainee and trainer.

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## OPERATE POWERED PEST MANAGEMENT EQUIPMENT

**MODULE 14**

**AFQTP UNIT 3**

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### SPRAYERS (14.3.4.2.)

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**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

## SPRAYERS

### *Task Training Guide*

<b>STS Reference Number/Title:</b>	14.3.4.2., Sprayers
<b>Training References:</b>	<ul style="list-style-type: none"> <li>• AFPMB TIM 24</li> <li>• Manufactures Manuals</li> </ul>
<b>Prerequisites:</b>	<ul style="list-style-type: none"> <li>• Possess as a minimum a, 3E4X3 AFSC</li> </ul>
<b>Equipment/Tools Required:</b>	<ul style="list-style-type: none"> <li>• Backpack dust-mist blower</li> <li>• Boom hydraulic sprayer (trailer-mounted)</li> <li>• Boomless hydraulic sprayer (trailer-mounted)</li> <li>• Skid-mounted sprayer</li> </ul>
<b>Learning Objective:</b>	<ul style="list-style-type: none"> <li>• The trainee should learn to operate the equipment.</li> </ul>
<b>Samples of Behavior:</b>	<ul style="list-style-type: none"> <li>• Trainee should operate the equipment.</li> </ul>
<b>Notes:</b>	
<ul style="list-style-type: none"> <li>• The trainee must demonstrate his/her ability to operate equipment to complete this lesson--no exceptions.</li> </ul>	

**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

## SPRAYERS

**Background:** One of the most important concerns in any pest management program is to properly select, use and care for pesticide dispersal equipment. There is a variety of pesticide formulations to choose from, there is also the need to select the equipment best designed to effectively apply those products.

The main powered operated sprayer are listed below.

**Table 1, Sprayers**

Type	Size and Appearance	Usage	Maintenance
1. Backpack mist-dust blower. (Figure 1)	5.3 gallons capacity for liquid pesticides 15 pound capacity for dry pesticides	Small outdoor areas. Areas unreachable with large mist-dust blowers.	Remove holding tank and clean inside and outside with water. Check tank cap for damage. Remove and clean volume control valve. Clean shoulder pads after each use. Check oil and fuel before each use. <b>Follow guidelines in owner's manual.</b>

**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.



**Table 1, Sprayers**

Type	Size and Appearance	Usage	Maintenance
2. Boom hydraulic sprayer (trailer-mounted). (Figure 2)	Tank size will vary with equipment purchased. Usually 200 to 500 gallon capacity. The pump has a 10 gallon per minute rate, 400 psi. maximum capacity. It has a gasoline air cooled engine to run pump. The boom is divided into three sections.	Applies pesticides at an even rate over a wide area of soil and turf in a single swath. Used to apply plant growth regulators, pesticides to control weeds in turf and grass, larval and adult pests of vegetation, fly larvae, and turf diseases.	Check oil every 5 hours. Add if needed. Change every 25 hours. Change gear reduction oil every 100 hours of operation. Clean and re-oil foam pre-cleaner every 25 hours of operation or 90 days whichever comes first. Clean or replace paper air cleaner cartridge every 100 hours or 12 months whichever comes first. Daily check operation pressure of sprayer. 250 psi is normal. <b>DO NOT</b> exceed 400 psi. Maintain 32 psi tire pressure. Clean boom by partially filling holding tank with potable water and run it through the boom. <b>Follow guidelines in owner's manual.</b>

**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

**Table 1, Sprayers**

<b>Type</b>	<b>Size and Appearance</b>	<b>Usage</b>	<b>Maintenance</b>
3. Boomless hydraulic sprayer (trailer mounted). (Figure 3)	Tank size will vary with equipment purchased. Usually 200 to 500 gallon capacity. The pump has a 10 gallon per minute rate, 400 psi. maximum capacity. It has a gasoline air cooled engine to run pump. Hose reel has 100 feet of hose with an adjustable pattern spray gun.	Disperses pesticides through a single nozzle. Applies residual sprays to trees, shrubs, vegetation, and buildings. Soil poisoning to control termites under building. Applies herbicides in ditchbank, irrigation and drainage systems, and in fencerow treatments.	Check oil every 5 hours. Add if needed. Change every 25 hours. Change gear reduction oil every 100 hours of operation. Clean and reoil foam precleaner every 25 hours of operation or 90 days whichever comes first. Clean or replace paper air cleaner cartridge every 100 hours or 12 months whichever comes first. Daily check operation pressure of sprayer. 250 psi is normal. <b>DO NOT</b> exceed 400 psi. Maintain 32 psi tire pressure. Clean sprayer by partially filling holding tank with potable water and run it through the sprayer. <b>Follow guidelines in owner's manual.</b>

**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

**Table 1, Sprayers**

<b>Type</b>	<b>Size and Appearance</b>	<b>Usage</b>	<b>Maintenance</b>
4. Skid-mounted sprayer. (Figure 4)	Unit and tank capacity will depend on unit purchased, usually 50 to 200 gallon capacity. Tank can be single or dual compartment. Pump rate is between 5 to 20 gallon per minute. The pump engine is a 3 HP or 7 HP gasoline engine.	Disperse emulsion and solution formulations. Soil poisoning operations to control termites, residuals to trees, shrubs, and grasses to control vegetation and ectoparasites pests. Apply residuals to exterior surfaces of buildings and beneath them to control disease vectors and venomous arthropods. Apply herbicides and larvicides to soil and water areas to control beetle, fly, and mosquito larvae.	Clean weekly. Clean spray nozzles by running potable water through holding tank and spray. Check oil after every use and change when necessary. Check all valves and gaskets for leaks and deterioration and replace when necessary. <b>Follow guidelines in owner's manual.</b>

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**Figure 1, Backpack Mist/Dust Blower**

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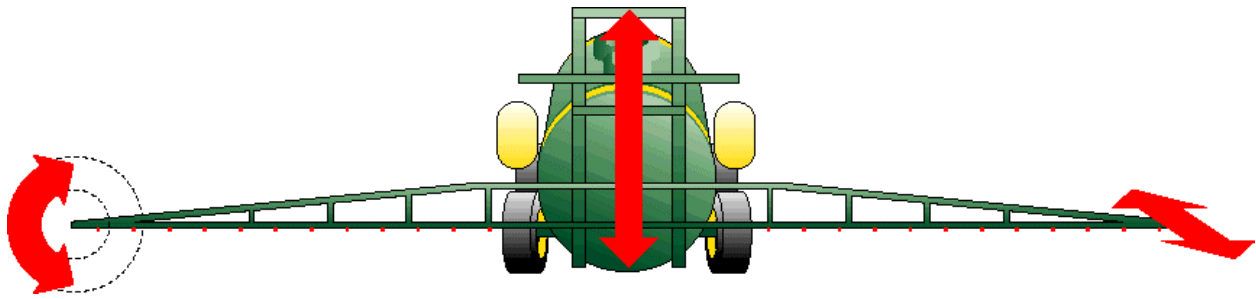


Figure 2, Hydraulic Boom Sprayer



Figure 3, Hydraulic Boomless Sprayer



Figure 4, Skid-mounted Sprayer

**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

*To perform the task, follow these steps:*

The step-by-step procedures for operating the powered duster are listed below.

**Step 1: Determine the pest to be eradicated.**

**Step 2: Select the proper pesticide to be applied.**

**Step 3: Select either the boom hydraulic sprayer, the boomless hydraulic sprayer or the skid-mounted sprayer. This will depend on the area to be treated.**

**Step 4: Fill the pesticide dispersal equipment with selected pesticide.**

**HINT:**

Your proper PPE must be worn during this operation.

**Step 5: Start your pesticide treatment.**

**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

### Review Questions for Sprayers

Question	Answer
1. Which of the following is an important concern for pesticide dispersal equipment?	a. Selection b. Use c. Care d. All of the above
2. The backpack mist-dust blower holds how much pesticides?	a. 5 gallons of liquid pesticide b. 6 gallons of liquid pesticide c. 5.3 gallons of liquid pesticides d. 6.3 gallons of liquid pesticides
3. The boom hydraulic sprayer pump is rate at gpm?	a. 12 gpm b. 10 gpm c. 13 gpm d. 11gpm
4. What psi must <b>not</b> be exceed on both the boom and boomless sprayers?	a. 400 psi b. 425 psi c. 395 psi d. 250 psi
5. Which of the following is a usage for the boomless hydraulic sprayer?	a. Fence row treatments b. Fly larvae treatments c. Large grass areas d. Plant growth regulators
6. Skid-mounted sprayer is used for which of the following?	a. Control beetle larvae b. Control disease vectors c. Control termites d. All of the above

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**SPRAYERS**

Performance Checklist		
Step	Yes	No
1. Did the trainee survey area and identify pest?		
2. Did the trainee select proper pesticide for pest problem?		
3. Did the trainee select the correct equipment?		
4. Did the trainee don proper PPE to mix pesticide?		
5. Did the trainee don proper PPE before application began?		

**FEEDBACK:** Trainer should provide both positive and/or negative feedback to the trainee immediately after the task is performed. This will ensure the issue is still fresh in the mind of both the trainee and trainer.

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## OPERATE POWERED PEST MANAGEMENT EQUIPMENT

MODULE 14

AFQTP UNIT 3

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### ULTRA-LOW VOLUME (UVL) DISPENSERS (14.3.4.3.)

---

**Notice.** This AFQTP is *NOT* intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

## ULTRA-LOW VOLUME (UVL) DISPENSERS

### *Task Training Guide*

<b>STS Reference Number/Title:</b>	14.3.4.3., Ultra-Low Volume (UVL) dispensers
<b>Training References:</b>	<ul style="list-style-type: none"> <li>• AFPMB TIM 24</li> <li>• Manufactures Manuals</li> </ul>
<b>Prerequisites:</b>	<ul style="list-style-type: none"> <li>• Possess as a minimum a, 3E4X3 AFSC</li> </ul>
<b>Equipment/Tools Required:</b>	<ul style="list-style-type: none"> <li>• Ultra low volume (ULV) dispensers (Gasoline or electric powered).</li> </ul>
<b>Learning Objective:</b>	<ul style="list-style-type: none"> <li>• The trainee should learn to operate the equipment.</li> </ul>
<b>Samples of Behavior:</b>	<ul style="list-style-type: none"> <li>• Trainee should operate the equipment.</li> </ul>
<b>Notes:</b>	
<ul style="list-style-type: none"> <li>• The trainee must demonstrate his/her ability to operate equipment to complete this lesson -- no exceptions.</li> </ul>	

**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

### ULTRA-LOW VOLUME (ULV) DISPENSERS

**Background:** One of the most important concerns in any pest management program is to properly select, use and care for pesticide dispersal equipment. There is a variety of pesticide formulations to choose from, there is also the need to select the equipment best designed to effectively apply those products.

The ultra low volume (ULV) dispenser is listed below.

**Table 1, ULV Dispensers**

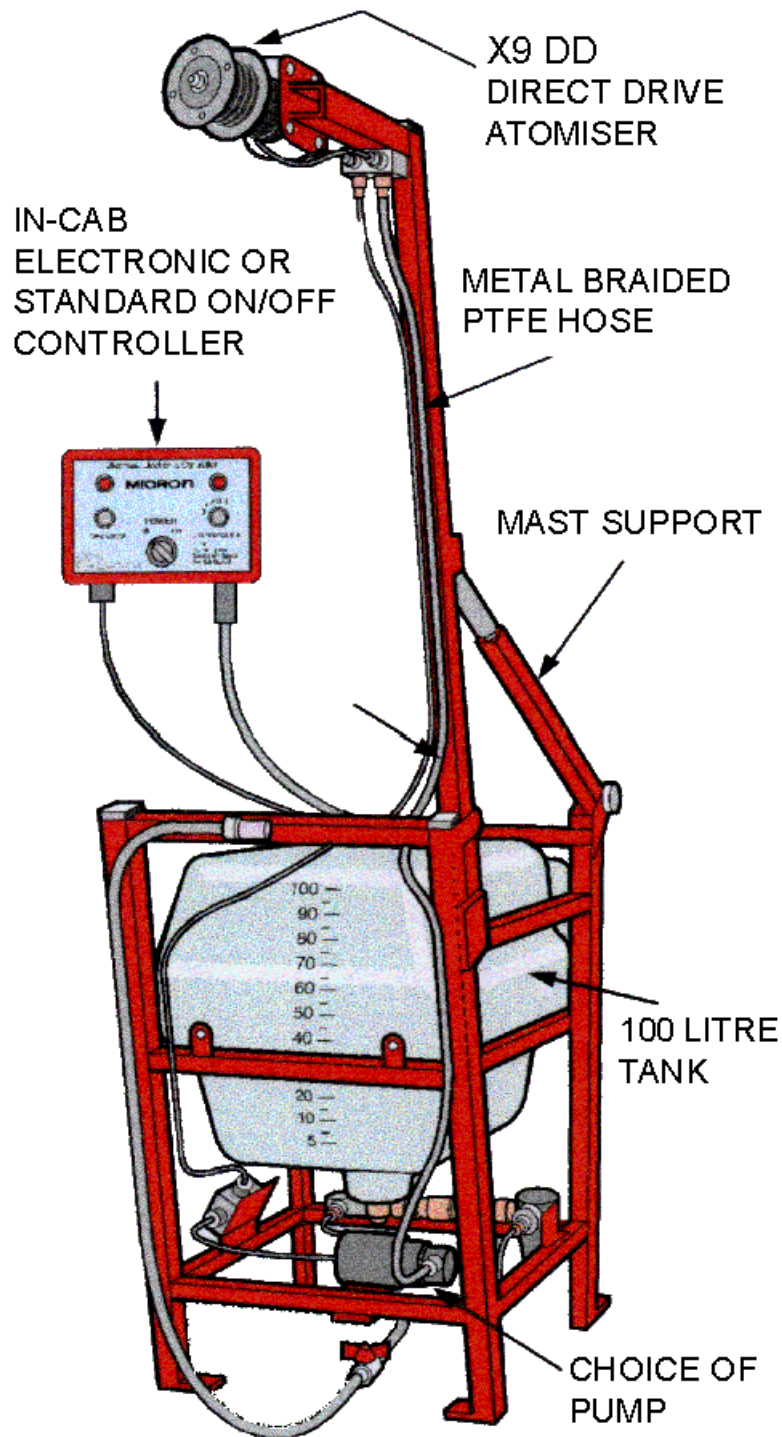
Type	Size and Appearance	Usage	Maintenance
1. Skid-mounted ULV dispensers. (Figure 1)	The gasoline powered ULV has 11 horsepower engine. Tank is 13 gallon capacity and is corrosive resistant. The nozzle assemble is boom mounted. Newer models have a remote control assemble which is located in the vehicle.	Dispenses concentrated formulations at flow rates in the range of 0.3 to 20 ounces per minute with droplet size less than 20 microns mass median diameter (MMD). Controls disease vectors such as mosquitoes over large outdoor areas.	Check oil every 8 hours or daily. Change oil/filter every 50 hours. Service pre-air filter every 25 hours. Service air filter every 100 hours. Clean cooling system every 100 hours. Flush formulation system every 8 hours or daily. Inspect battery fluid every 50 hours. Clean formulation filter every 50 hours. Inspect flexible drive coupling every 100 hours.

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Table 1, ULV Dispensers

Type	Size and Appearance	Usage	Maintenance
Skid-mounted ULV dispensers.			<p>The rotary blower oil should be checked every 8 hours or daily. Clean air filter every 100 hours. Grease blower every 100 hours.</p> <p><b>Note:</b> The changing of oil, oil filters and air filters may be more often because of high temperatures and dusty conditions.</p> <p><b>Follow guidelines in owner's manual.</b></p>

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**Figure 1, Skid Mounted ULV Dispensers**

**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

*To perform the task, follow these steps:*

The step-by-step procedures for operating the powered duster are listed below.

**Step 1: Determine the pest to be eradicated.**

**Step 2: Select the proper pesticide to be applied.**

**Step 3: Select either the boom hydraulic sprayer, the boomless hydraulic sprayer or the skid-mounted sprayer. This will depend on the area to be treated.**

**Step 4: Fill the pesticide dispersal equipment with selected pesticide.**

**Step 5: Start your pesticide treatment.**

**HINT:**

Your proper PPE must be worn during this operation.

**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

**Review Questions**  
**For**  
**Ultra-Low Volume (ULV) Dispensers**

Question	Answer
1. Which of the following is an important concern for pesticide dispersal equipment?	a. Selection b. Use c. Care d. All of the above
2. The ULV dispenser holding tank is made from what type of material?	a. Plastic b. Metal c. Corrosive resistant d. Rubber
3. ULV dispensers controls what disease vectors?	a. Flies b. Mosquitoes c. Fleas d. Mites
4. The formulation system should be flushed every?	a. 8 hours b. 6 hours c. 5 hours d. 9 hours
5. Oil, oil filters and air filters are changed frequently due to?	a. Low temperatures and high dust areas. b. High temperatures and low dust areas. c. High temperatures and high dust areas. d. Moderate temperatures and moderate dust.
6. Always follow guidelines in owner's manual.	a. True b. False

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### ULTRA-LOW VOLUME (UVL) DISPENSERS

Performance Checklist		
Step	Yes	No
1. Did trainee survey area and identify pest?		
2. Did trainee select proper pesticide for pest problem?		
3. Did trainee select the correct equipment?		
4. Did trainee don proper PPE to mix pesticide?		
5. Did trainee don proper PPE before application began?		

**FEEDBACK:** Trainer should provide both positive and/or negative feedback to the trainee immediately after the task is performed. This will ensure the issue is still fresh in the mind of both the trainee and trainer.

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## OPERATE POWERED PEST MANAGEMENT EQUIPMENT

MODULE 14

AFQTP UNIT 3

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ROTO-HAMMERS (14.3.4.4.)

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**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

## ROTO-HAMMERS

### *Task Training Guide*

<b>STS Reference Number/Title:</b>	14.3.4.4., Roto-Hammers
<b>Training References:</b>	<ul style="list-style-type: none"><li>• AFPMB TIM 24</li><li>• Manufactures Manuals</li></ul>
<b>Prerequisites:</b>	<ul style="list-style-type: none"><li>• Possess as a minimum a, 3E4X3 AFSC</li></ul>
<b>Equipment/Tools Required:</b>	<ul style="list-style-type: none"><li>• Roto hammer</li><li>• Masonry bit</li><li>• Vise grips</li></ul>
<b>Learning Objective:</b>	<ul style="list-style-type: none"><li>• The trainee should learn to operate the equipment.</li></ul>
<b>Samples of Behavior:</b>	<ul style="list-style-type: none"><li>• Trainee should operate the equipment.</li></ul>
<b>Notes:</b>	
<ul style="list-style-type: none"><li>• The trainee must demonstrate his/her ability to operate equipment to complete this lesson--no exceptions.</li></ul>	

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## ROTO-HAMMERS

**Background:** The roto hammer is a large industrial drill with a hammering mechanism. The main use of the roto hammer is to drill holes through masonry for sub-slab injection of Termiticides.

The main powered operated sprayer are listed below.

Type	Size and Appearance	Usage	Maintenance
1. Roto hammer (Figure 1)	Three quarter inch heavy-duty roto hammer. Drill has a hex rod which helps in drilling holes to set depths. It has support handle which aids in supporting roto hammer when drilling. Support handle is interchangeable from side to side. Roto hammer has various bits but the rotary carbide bit is used primarily.	The roto hammer is mainly used to drill holes into masonry so termiticides can be applied under the slab.	Apply three squirts of SAE 10W turbine oil into the nose and in the oil reservoir for automatic oiler.  Ensure the drill bit shank is clean before installation. Ensure the hammer is grounded before you use it. Adjust the clutch torque before use. This prevents spinning of drill if it binds. Check the clutch while operating roto hammer. The clutch may tighten or loosen during operation. <b>Follow guidelines in owner's manual.</b>

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**Figure 1, Roto Hammer**

*To perform the task, follow these steps:*

The step-by-step procedures for operating the roto hammer are listed below.

**Step 1: Identify termite infestation location.**

**Step 2: If termites are located under masonry slabs, then the roto hammer shall be used.**

**Step 3: Holes are drilled every twelve inches for the entire area to be treated.**

**Step 4: While drilling holes, periodically check oil.**

**Step 5: Also check the clutch to prevent bit slippage.**

**Step 6: Occasionally clean bit of excess dust.**

**Step 7: Allow roto hammer to cool while performing large jobs.**

**Step 8: Apply termiticide when drilling is accomplished.**

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### Review Questions for Roto-Hammers

Question	Answer
1. When is the roto hammer used?	a. Termiticiding b. Herbiciding c. Insecticiding d. Larviciding
2. What type of bit is used?	a. Channeling bit b. Masonry bit c. Core bit d. Mortar bit
3. What type of oil is used for lubricating the roto hammer?	a. SAE 10W-30 motor oil b. SAE 30W motor oil c. SAE 10W turbine oil d. SAE 10W-30 turbine oil
4. Holes must be drilled every?	a. 18 inches b. 16 inches c. 14 inches d. foot
5. There is no requirement for PPE during this operation.	a. True b. False
6. Oil levels should occasionally be checked during drilling operations.	a. True b. False

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### ROTO-HAMMERS

Performance Checklist		
Step	Yes	No
1. Did the trainee survey area for termite location?		
2. Did the trainee select proper equipment to perform termiticide application?		
3. Was the trainee able to operate equipment?		
4. Did the trainee don proper PPE for this operation?		
5. Did the trainee perform post-operation maintenance?		

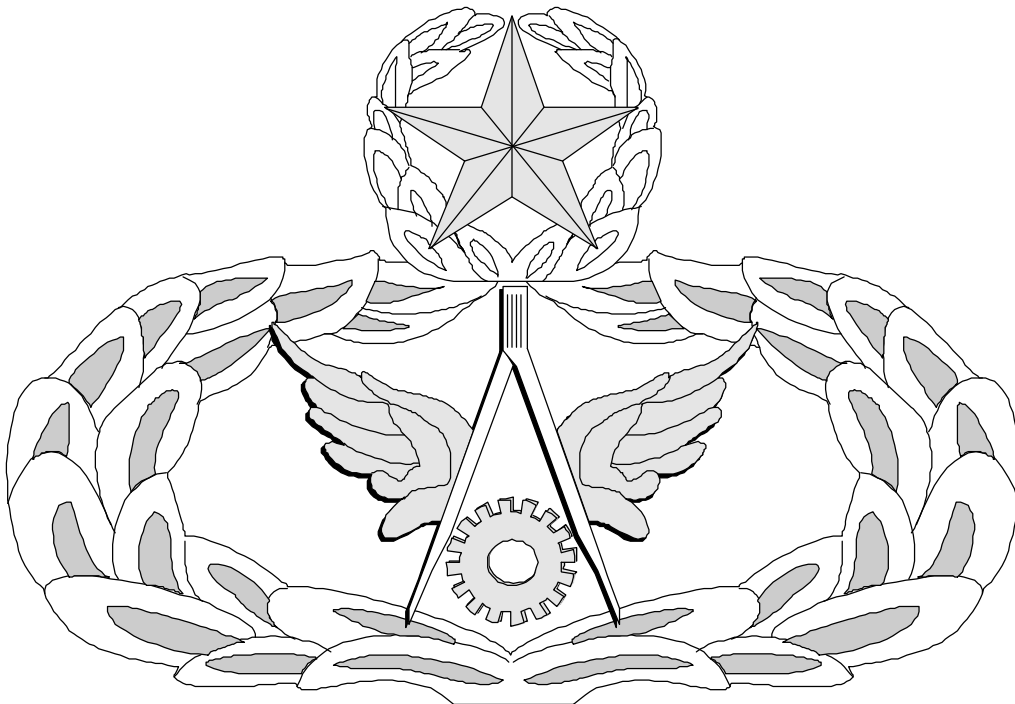
**FEEDBACK:** Trainer should provide both positive and/or negative feedback to the trainee immediately after the task is performed. This will ensure the issue is still fresh in the mind of both the trainee and trainer.

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# **Air Force Civil Engineer**

## **QUALIFICATION TRAINING PACKAGE (QTP)**

### **REVIEW ANSWER KEY**



**For**  
**ENVIRONMENTAL**

**(3E4X3)**

**MODULE 14**

**OPERATION AND MAINTENANCE OF PEST MANAGEMENT**

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**Key-1**

**DUSTERS**

**(3E4X3-14.2.4.1.)**

<b>Question</b>	<b>Answer</b>
1. Which of the dusters listed below is <b>not</b> a manual operated duster?	b. The ULV duster
2. The bulb duster has a spring inside to help hold its shape.	b. False
3. This duster is used for small to medium jobs such as tracking powder.	c. The bellows duster
4. This duster has a 16 oz capacity and can be used for bee jobs.	b. The plunger duster
5. What is the first step in operating a spreader?	b. Identify the pest
6. No PPE is needed when filling the duster or spreader.	b. False
7. This manual operated piece of equipment is used in small outdoor areas and has a 200 pound per hour rate of flow.	c. The hand cranked spreader

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**SPRAYERS****(3E4X3-14.2.4.2.)**

<b>Question</b>	<b>Answer</b>
1. Which of the following is <b>not</b> a manual liquid sprayer?	b. Hydraulic Sprayer
2. The compressed-air sprayer is the heart of pest control operation.	a. True
3. What is the tank capacity of the pressurized cylinder sprayer?	b. 15 pounds
4. What is the hand-held electric sprayer used for?	c. ULV Fogging operations
5. What is the third step in the procedures for selecting manual sprayers?	c. Select the equipment
6. No PPE is needed while filling and operating manual spray equipment.	b. False

**GRANULE SPREADERS****(3E4X3-14.2.4.3.)**

<b>Question</b>	<b>Answer</b>
1. What is the first step in operating a spreader?	b. Identify the pest
2. No PPE is needed when filling the duster or spreader.	b. False
3. This manual operated piece of equipment is used in small outdoor areas and has a 200 pound per hour rate of flow.	d. The hand cranked spreader

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**TRAPPING DEVICES**

**(3E4X3-14.2.4.4.)**

<b>Question</b>	<b>Answer</b>
1. Which trap is 2 in. x 4 in. and has a wooden base?	d. Mouse trap
2. The tin cat has a clear plastic cover in the top for observation.	a. True
3. Which of the following is not a use for glueboards?	c. Trapping moles
4. Which trap has two doors made of dangling metal that look like fingers?	b. Pigeon traps
5. Which trap consists of a photo-cell, light bulb and fan?	b. Light trap (Sam's)
6. Which trap is used exclusively for moles?	a. Harpoon trap
7. Once the traps are set there is no need to check them.	b. False

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**DUSTERS****(3E4X3-14.3.4.1.)**

<b>Question</b>	<b>Answer</b>
1. Which of the following is an important concern for pesticide dispersal equipment?	d. All of the above
2. What is the maximum amount dry pesticide can the backpack mist-dust blower carry?	c. 15 pounds
3. Electric dust blower is used to dust or treat voids, attics and crawl spaces?	a. True
4. What is the maximum amount of pesticide can the electric dust blower can carry?	a. 1.5 gallons

**SPRAYERS****(3E4X3-14.3.4.2.)**

<b>Question</b>	<b>Answer</b>
1. Which of the following is an important concern for pesticide dispersal equipment?	d. All of the above
2. The backpack mist-dust blower holds how much pesticides?	c. 5.3 gallons of liquid pesticides
3. The boom hydraulic sprayer pump is rate at gpms?	b. 10 gpm
4. What psi must <b>not</b> be exceed on both the boom and boomless sprayers?	a. 400 psi
5. Which of the following is a usage for the boomless hydraulic sprayer?	a. Fence row treatments
6. Skid-mounted sprayer is used for which of the following?	d. All of the above

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### ULTRA-LOW VOLUME (ULV) DISPENSERS

(3E4X3-14.3.4.3.)

Question	Answer
1. Which of the following is an important concern for pesticide dispersal equipment?	d. All of the above
2. The ULV dispenser holding tank is made from what type of material?	c. Corrosive resistant
3. ULV dispensers controls what disease vectors?	b. Mosquitoes
4. The formulation system should be flushed every?	a. 8 hours
5. Oil, oil filters and air filters are changed frequently due to?	c. High temperatures and high dust areas.
6. Always follow guidelines in owner's manual.	a. True

### ROTO-HAMMERS

(3E4X3-14.3.4.4.)

Question	Answer
1. When is the roto hammer used?	a. Termiticiding
2. What type of bit is used?	b. Masonry bit
3. What type of oil is used for lubricating the roto hammer?	c. SAE 10W turbine oil
4. Holes must be drilled every?	d. foot
5. There is no requirement for PPE during this operation.	a. False
6. Oil levels should occasionally be checked during drilling operations.	a. True

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